



USAID/Santo Domingo
March 31, 2002

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Close Out Report Special Objective: Hurricane Georges Recovery and Reconstruction

1. Basic Identifying Information

Country/Organization: USAID/Dominican Republic
SPO Name: Hurricane Georges Recovery and Reconstruction
SPO Number: 517-005
SPO Project Numbers: # 517-0278 and 517-0280
Project Grant Agreement date: February 17, 1999
CACEDRF Approval Date: August 3, 1999

Relief and Recovery phases were initiated immediately following Hurricane Georges on 9/28/98
Geographic Area: Specific regions of the Dominican Republic affected by Hurricane Georges in Sept. 1998. Areas included the East and south of the central mountain range all the way to Haiti border.

2. Total cost of the SPO by USAID funding account, counterpart contributions and other partner resources that contributed to results achievement

a. USG investment: (see annex # 1 USAID/Santo Domingo RECON Special Objective Program Portfolio for complete breakdown)

Emergency Relief/Recovery Phase = \$41.7 million (USAID/OFDA, P.L. 480 Title II, USAID, USDA, US Military)

Reconstruction Phase = \$29.0 million (USAID/CACEDRF - Supplemental Recon)
= \$ 5.9 million (Other US Agencies/CACEDRF)

Total USG Investment = \$76.6 million

Detailed breakdown of the total US Government Investment was as follows:

Emergency/Recovery Phases US Government total investment	\$41.7 million
-USAID/OFDA (Immediate Aid: helicopters, tents, food, water)	\$ 2.1 million
-USAID (P.L. 480 Title II food aid)	\$10.2 million
-USAID (Child Survival Funds- repair water/sanitation systems)	\$ 6.0 million
-USAID/OFDA	\$ 2.9 million
-\$2 million: Temporary shelter/latrines from felled trees	
-\$609,000: Land leveling and replanting plantains	
-300,000: generators, plastic sheeting, and vegetable seeds	
-USDA/USAID (416b Small Farmer Recovery Program)	\$16.5 million
-\$15.0 million: USDA wheat donation	

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- \$1.5 million: Management (includes \$1.0 million USDA PASA)
- US Military (rebuilding schools/bridge) \$ 4.0 million

Reconstruction Phase (Aug.1999 - Dec.2001) \$34.9 million

USAID CACEDRF TOTAL FUNDS..... \$29.0 million

- Health: \$5.9 million
- Shelter: \$7.8 million
- Economic Reactivation: \$7.3 million
- Disaster Mitigation: \$4.4 million
- Administration/ Management: \$3.6 million

OTHER USG AGENCIES (Aug.1999 - Dec.2001) \$ 5.9 million

Centers for Disease Control and Prevention \$2.0 million
U.S. Department of Housing and Urban Development \$2.5 million
U.S. Dept. Commerce/National Institute Standards & Tech. \$500,000
Federal Emergency Management Agency \$500,000
National Oceanographic and Atmosphere Administration \$100,000
U.S. Department of Agriculture \$220,000
U.S. Geological Survey \$ 50,000

b. Counterpart resources for the reconstruction phase supplemental funded activities: (see complete breakdown in Annex # 2 – “Hurricane Georges Reconstruction Project – Financial Status as of 31, December 2001)”¹

Partners (GODR and NGOs) = \$9.2 million
Beneficiaries = \$4.2 million
Total Investment = \$13.4 million

c. Other donor resources:

World Bank = \$122 million (import food and medicines, major infrastructure, early warning)
IDB = \$104 million (major infrastructure, recurrent social expenditures, disaster prevention)
IMF = \$55 million (emergency line of credit for disaster related expenses)
EU = \$42 million (major infrastructure, water purification, emergency relief)
Spain = \$21 million (housing, humanitarian aid, small business, communications)
New York City = \$0.5 million (estimated amount in rehabilitation of hospital, electricity, fire fighting equipment, health)

3. Principle implementing partners (all sources, by IR; see detail in Annex No.2)

¹ Counterpart contributions were not required but negotiated with partners, an estimated combined result of 107% from NGOs and Beneficiaries was obtained during implementing activities until December 31, 2001.

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- a. **Other US Agencies:** US Department of Agriculture (USDA), Department of Housing Urban Development (HUD), Center for Disease Control (CDC), Federal Emergency Management Agency (FEMA), National Institute of Standards and Technology (NIST), National Oceanographic and Atmospheric Administration (NOAA), US Geological Survey (USGS), US Army Corps of Engineers (USACE), US Forestry Service (USFS), US Peace Corps, US Military-Southcom
 - b. **NGOs:** Cooperative Housing Foundation (CHF), National Rural Electrification Cooperatives Association (NRECA), World Vision, Save the Children, CRS, AED, Red Cross, Plan International and a number of Dominican NGOs
 - c. **Institutional Contractors:** International Resources Group (IRG), John Snow Inc. (JSI), Entrena, Banco Dominicano de Desarrollo (BDD), EHP
 - d. **GODR Institutions:** Secretaria Tecnica de la Presidencia (STP), SESPAS, Secretaria de Estado de Agricultura (SEA), Instituto Nacional de Agua Potable (INAPA), Instituto Nacional de la Vivienda (INVI), Instituto Nacional de Ayuda para la Vivienda (INAVI), Instituto Nacional de Recursos Hidraulicos (INDRHI), Secretariat of Environment, Civil Defense, Ministry of Public Works, Dept of Meteorology, Presidential Plan Barrial and Plan Social.
 - e. **Private Sector:** AES, ASONAHORES, Specialty Coffee Association of America, American Cocoa Research Institute, Central Romana.
 - f. **Other Donors:** World Food Program, PAHO, WB, IDB, EU, Spanish
- 4. Summary of overall impact at SPO and IR levels in relation to what was originally planned (IR level summaries follow in this report)**

Hurricane Georges is considered one of the most devastating natural disasters that has affected the Dominican Republic, decimating the country's ability to continue struggling for development. USAID responded with a progressive effort with expanding vision, moving through immediate relief to short term recovery and long-term reconstruction. The focus was on helping the most affected people recover from the destruction and being better prepared to respond to the next disaster at the national and community levels.

While a number of bilateral and international donors were involved in the immediate relief efforts, the US Government was the only major bilateral donor that stayed the course to partner with the Dominican Government, the private sector and NGOs to assist poor hurricane victims get back on their feet. While other major donors decided to focus on rehabilitation of major infrastructure, the USGS program was based upon restoring basic needs of the poorest population at the community level (health, water, food, shelter) by "building back better", helping people to recover their sources of livelihood, and improving their ability to deal with the next natural disaster (hurricane and earthquake). Heavy emphasis was placed on the formation

of strategic alliances between communities, NGOs, government agencies and the private sector in order to leverage resources and promote sustainability. The Mission leveraged significant amounts of additional resources from these partnerships.

Overall US Government effort in the DR was a resounding success involving 12 US Federal agencies, 10 GODR agencies, more than 50 NGOs and a number of private companies. About 1.2 million people, representing around 15% of the population, benefited directly in the five program areas (health, shelter, food, economic reactivation and disaster mitigation) and 99.5% of the program funds were expended in record time with no major audit findings from the GAO, RIG or local activity auditors. Intensive Mission monitoring coupled with quick decisive action to resolve implementation problems and reprogram funds, led to the successful achievement of objectives in all areas.

In addition to meeting and surpassing expectations, innovative initiatives were launched in all the program areas that will continue producing fruit well into the future. Examples presented in this report include decentralization of rural water systems, with more community responsibility for construction and management; enhanced epidemiological surveillance; introduction of Integrated Management of Childhood Illnesses (IMCI); modern low cost progressive urbanization models for low income housing; improved construction technology for hurricane resistant housing; effective models for hurricane-resistant rural electrification; an ongoing hurricane preparedness training program for micro-enterprises; national focus on production and marketing of specialty coffee; initiation of the country's first dam safety program; implementation of the country's first management plan for national forests; introduction of a national clearinghouse for geographically referenced data; development of a national emergency operations center and emergency national logistics management system; and the first inspection program for structural integrity of public emergency buildings.

NGO partners performed exceptionally well as they implemented sustainable programs, meeting or surpassing all targets in record time. They proved that there is a strong base of local NGOs capable of implementing a reconstruction and development program in a cost effective, transparent manner. The communities in the eastern, southern and western parts of the country are better prepared to deal with the next hurricane.

The Mission design for the entire effort proved very effective and many of the innovative efforts as well as the more traditional response activities should become standard components for future hurricane response programs. For example, during the immediate to short-term recovery period the emphasis should be on: repair of water systems, seed distribution of fast growing crops, land leveling to bring important staple crops back quickly, use of fallen trees for temporary shelter, food for work and monetization of food for small farmer recovery efforts.

During the reconstruction phase we focused on longer-term results, with high-impact activities that were shorter in term than a regular development program, but which foster sustainability in the long run. The success of this phase was mostly due to alliances formed with seasoned development actors. From its PVO-Co-financing project, USAID identified and learned how to work with a group of NGOs that had all the necessary background to support an incredible implementation pace. The investment made at the community level, the beneficiary ownership

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of projects and the GODR participation were key elements to success in this effort. The time pressure on the entire program led to an accelerated implementation process demanding tight monitoring, continuous control and intensive follow-up on expenditures and procedures.

All the players involved in the Hurricane Georges Reconstruction Program graduated with honors and contributed to the program's successful completion.

The players have documented the benefits of a partnership², and set the stage for future development activities that can replicate these successes on a larger scale if the appropriate funding is available. The GODR, understanding the tight deadlines imposed by the program, performed at a faster pace than normal in committing and disbursing resources to avoid delays in implementation deadlines. The participating NGOs consolidated and increased their implementing capacity, maintained calm and moved forward under very tight time frames, expenditure controls and reporting procedures. The beneficiary community had a key role in the development and implementation of each project and activity as well as providing their own counterpart contribution (not originally required) in labor. This partnership between USAID, the GODR, the participating NGOs and the local communities has proven to be very successful.

The US government made an initial investment of \$3.1 million during the Emergency/Relief Phase in three main activities that were health/water, shelter and food distribution. With this funding 10 community water systems were repaired to provide water to 40,500 people; 355 500-gallon water tanks and water purification chemicals were distributed; 10 electricity generators were provided. Temporary houses were provided for about 2,000 families and 1,600 houses repaired with wood from salvaged trees, 30 military tents were installed, and 1,000 plastic sheeting rolls for roofs were distributed to protect 6,000 temporary roofs. For the food distribution 6 helicopters were used for transportation, food/water rations were delivered to 21,000 people, fast growing vegetable seed was distributed to 5,100 farmers and land leveling was done to replant 800 hectares of plantains. Additional funding from the US Military (\$4million) and USAID reconstructed 6 schools in Monte Plata and a bridge in Manabao. USAID and USDA also funded a 416b food aid Small Farmer Recovery Program (\$16.5million) during this Phase. (For details see the impact and activity description for IR4).

During the Reconstruction Phase a total of \$34.9 million were invested to obtain the following results:

IR-1: 118,400 people with access to rebuilt potable water systems
77,500 people with access to rebuilt sanitation systems
178,670 people receiving re-established primary health care

IR-2: 1,555 houses repaired
2,248 houses constructed

IR-3 16,750 MT of rice, beans, wheat and vegetable oil distributed

² “For example the coffee sector of the Dominican Republic is now the most united it has ever been. Government institutions, NGOs and the private sector are all working together (an uncommon occurrence) on developing a specialty coffee industry in the D.R.

330,000 people received food aid

- IR-4 18,750 people with restored energy systems
12,405 small farmers received assistance to rehabilitate farms
6,000 micro-entrepreneurs trained and received assistance to recover
- IR-5 7,959 hectares of land treated with improved soil conservation and reforestation
2,396 leaders of 82 communities and 69 villages were trained in disaster preparedness
100,000 people in 3 riverfront barrios have community mitigation and evacuation plans developed and evacuation infrastructure constructed

Impact at IR Level:

IR-1 Mitigation of Health Risks

The objectives of IR1 were (1) to mitigate health risks of the victims of Hurricane Georges and (2) to strengthen the capability and readiness of national and indigenous partner non-governmental and community-based organizations to help the population prepare for and cope with future disasters. More than 415,000 of the hardest-hit hurricane victims participated in primary health, water and sanitation projects implemented under IR1 (this includes emergency relief, recovery and reconstruction). These timely interventions helped 250 communities recover from the destruction of Hurricane Georges by building back better in each program component of IR1. Under primary health, the Ministry of Health's newly adopted strategy for community-level *Integrated Management of Childhood Illnesses* (IMCI) was introduced. Under water, access to potable water was expanded with community reconstructed and managed water systems; additionally, the standard on water system construction was raised to include household connections where feasible. Under sanitation, coverage was increased to over 75% in the project communities; composting latrine technology was introduced on an unprecedented scale to protect superficial ground water; and, modern sewage systems were built to complement new urbanizations constructed under IR2. Implementing NGOs used beneficiary participation as a basis for building strong community-based organizations that could respond better to any future disaster. Long-standing USAID partnerships with the Ministry of Health (MOH), the National Water Authority (INAPA), UNICEF and the Pan-American Health Organization were strengthened; new partnerships with the GODR's Presidential Plan for Poverty Alleviation and the State Sugar Board were forged.

IR-2 Shelter Restored

The objectives of IR2 were to support the self-help efforts of low-income families to repair/retrofit or to reconstruct the houses that were damaged or destroyed by the Hurricane Georges. In order to build back better, manuals were developed for improved hurricane construction technology for traditional constructions. Phase I benefited more than 20,000 people when OFDA funded, through three local NGOs Phase I activities that included repairing/retrofitting and reconstructing 3,346 houses in situ. In this stage, USAID demonstrated the feasibility of salvaging hurricane-damaged trees for housing construction and repairs. During Phase II approximately 23,000 people were the direct beneficiaries with shelter restored. Almost \$8 million of Supplemental funds were invested to repair/retrofit 1,555 units, construct in

situ 1,219 new houses and build 1,029 progressive low-income houses in 5 new urbanization sites. This USAID investment demonstrated the benefits and feasibility of partnerships that included communities, GODR and, private sector by leveraging more than \$4.5 million from these partners. The new urbanization sites demonstrate the feasibility of the concept of progressive low income houses with all services included to shelter families that were displaced from vulnerable low lying areas or families who must be moved to protect the environment. For example, one of the housing projects that relocates families will serve to protect a fragile portion of a national park and the water source for a leading tourist resort area. This new urbanization site construction also demonstrated the efficiency of modular construction techniques by cutting down the time and cost in the construction of these progressive low-income houses. By participating in these projects, local NGOs have gained experience and upgraded their construction technology. They will be able to continue with these positive experiences on their own. USAID supported a local NGO, to initiate a new secondary discount facility for low-income mortgages that will serve to inject more private and public sector funds into the low-income housing sector. To date the first loan fund devoted to low income housing repairs was initiated. Fondovip with the help of RUDO consultants has been working with housing authorities (INVI and the BNV) to shape a new housing policy that favors market-oriented forces to generate additional houses for low-income Dominicans. IDB is also supporting the move to get INVI out of the construction business and stop competing with the private sector. Incentive packages are being designed to encourage the private sector to build low cost, low-income houses. This will probably include consumer subsidies managed by INVI. In this "Dominican year of housing", Fondovip has been charged to continue developing this new national policy and strategy for low-income housing.

IR-3 Food Supply Levels Restored

The objectives of IR3 were (1) to increase Hurricane Georges victims' access to basic foods and (2) to strengthen the capability and readiness of national and indigenous partner non-governmental and community-based organizations (NGOs) to help the population prepare for and cope with future disasters. Over 330,000 people benefited from Title II Emergency Food Aid donated from the Bureau of Humanitarian Response's Office of Food for Peace. The program helped to alleviate food insecurity, acting as an income transfer to the target population, allowing them to spend scarce resources on self-help housing reconstruction and purchase of domestic goods lost to the hurricane. Additionally, the program supported long-term solutions to food insecurity via the Food-for-Agricultural Reactivation activities. More than 158 NGOs participated in the program, nearly all of which reported increased community participation and organizational capacity to mobilize this participation. Other results included reconstruction of housing, sanitation and water systems, supported by FFW.

IR-4 Reactivation of Economic Activities

The objective of IR4 was to reactivate economic opportunities of poor people affected by Hurricane Georges by (1) helping small farmers rehabilitate and repair agricultural resources, (2) restoring electricity services, and (3) helping micro-entrepreneurs to restore their productive capacity and protect their small business from future natural disasters. As a result of various project activities, over 100,000 small farmers recovered agricultural and livestock production,

electricity was restored for about 19,000 people, primarily in the Eastern part of the country, and about 5,500 micro-entrepreneurs benefited from technical assistance and training to restore and/or protect their businesses. The overall impact was to directly assist a large portion of the population most devastated by the hurricane to recover their livelihoods, while reactivating whole sectors of the economy that affect the poor, generating hope and creating a base for continued recovery and enhanced preparation for another natural disaster.

Agriculture: In the agricultural sector the majority of the projects focused on the recovery of major small farmer cash crops such as coffee, cocoa, plantains and vegetables. Coffee and cocoa are the 2nd and 3rd leading export crops and the major source of income for over 50,000 small farmers. Production has recovered to pre-hurricane levels and strategic alliances have been formed that will continue to benefit certain crops. For example, coffee which was devastated by the hurricane, followed by the precipitous decline in coffee prices, prompted a number of forward thinking public and private institutions to collaborate, and with USG assistance, to develop a new strategy for the coffee industry that promotes the production and marketing of high - value specialty coffee. This new initiative has injected hope into the sector as farmers receive significantly higher prices for their quality coffee.

Energy: The electric power rehabilitation program had a direct impact on the lives of 18,750 individuals that got back an improved electric service so that they could restart their businesses and take advantage of new productive use opportunities. The partnership between NRECA, AES and CDE created a win - win situation that allowed the project to surpass targets but also resulted in better trained AES employees and the ability for AES to improve service and collection for that region of the country. The project demonstrated an effective partnership model for future cooperation and expansion to other under-served regions of the country. Another major impact is that NRECA and AES reinstalled an electric distribution system that is more hurricane resistant than any other in the country, with very simple technology, such as placing chemically treated imported wooden poles a little deeper than before and anchoring them for added strength. This should be used as a hurricane standard for the entire grid in the DR.

Micro-enterprise: The Mission reactivated and strengthened the productive capacity of the micro-entrepreneurial sector affected by hurricane Georges. This sector employs about 29% of the active work force in the country. Under the Micro-enterprise reactivation program almost 6,000 microentrepreneurs (73% female) in 85 communities received technical assistance and training from a local technical university to help them recover from the effects of the hurricane and be better prepared for the next one. Assistance was also provided to help reschedule loans. The program introduced for the first time, the concept of prevention and preparedness to protect micro-enterprises and help them to quickly recover from a natural disaster. The most gratifying impact is to see many microentrepreneurs renew their hope and enthusiasm to either reopen or continue their businesses after being affected by the hurricane.

IR-5 Disasters Mitigated

The objective of IR5 was to increase the capability of the population to cope with future disasters by 1) helping local communities develop disaster preparedness plans; 2) improving coordination

between government agencies and providing technical assistance to strengthen the emergency management system; and 3) improving land, forest and watershed management.

As a result of USAID's efforts, 100,000 people living in marginal barrios close to the city have developed community mitigation plans including an evacuation plan and rehabilitated evacuation routes. Approximately 2,400 community leaders from 82 communities and 69 villages have participated in disaster awareness and preparedness training. Several models were used that are in the process of being evaluated. Results should be available 3/31/02.

Improved forestry management and forest cover was an important objective designed to prevent the heavy wind damage to forests and flooding caused by hurricanes due to the lack of adequate vegetative cover on hillsides. Over 9,000 hectares of land were treated with soil conservation practices including reforestation with the assistance of a number of NGOs. USFS efforts focused on strengthening central government preparedness and response to disasters, including forest fires. The Dominican Forestry Dept (SUREF) was strengthened in the areas of fire prevention and response, communications, protection and silviculture. Two fire towers were restored and the fire brigade equipped and trained and the forestry radio system has been doubled. The first forestry management plan for a national forest is being developed which includes a system for monitoring pest problems. This will improve forestry management throughout the country. The first systematic urban forestry program was established including cooperation between SUREF, municipalities and the two major cities. New urban forestry legislation is being developed. The first salvaging program was established within SUREF, which led to an innovative program, to turn hurricane damaged trees into lumber for the construction and repair of almost 4,000 homes for hurricane victims while clearing the forest of fallen trees that posed a greater fire hazard.

At the national level, a Logistics Management System for medical and emergency supplies is in place in two pilot regions. A Dam Safety Program was developed and three major dams were inspected by the USACE under contract with USAID. The program has raised awareness at high levels of the importance of dam safety due to the large populations at risk below the major dams. The GODR is using the proposal prepared by USACE to raise funds from other donors to implement the program. The US Army Corps of Engineers and HUD conducted several flood risk studies and maps in Santo Domingo and La Vega that will be used by authorities for urban planning. The Dominican National Emergency Commission hosted and participated in OFDA's Disaster Management and Damage Assessment courses. Technical assistance and equipment have been provided to the Civil Defense training department to continue this training. The USGS produced a land-use map to be used by the Natural Resource Secretariat to monitor and control environmental degradation.

5. Significant changes in the Results Framework during life of the SPO

The only change in results framework occurred under the housing component where midway through the program, the Mission decided to shift from additional repairs and in-situ reconstruction to focus on the construction of new low-income housing developments with all basic services to house poor hurricane victims still living in deplorable temporary shelters. This was accomplished in partnership with GODR housing and services institutions.

Results frameworks for all other IRs remained intact.

6. Summary of activities used to achieve the SPO and their major outputs

A number of activities were designed to achieve desired results within each IR, under the general theme of helping the most severely affected population recover from Hurricane Georges and be better prepared to face another natural disaster. This was accomplished via a continuous program that initially focussed on relieving immediate basic needs of poor victims and then moving through recovery and reconstruction phases with a longer vision where the emphasis was placed on community participation, building back better, forming long-lasting alliances for sustainability and improving overall preparedness at the national and community levels for the next disaster. Activities under all of the IRs were assigned to experienced NGOs and contractors with proven track records that sought to leverage additional resources to the maximum extent possible, given the short implementation time frame. Over 50 NGOs and institutional contractors were used to accomplish the objectives of the program, including close coordination with 12 different USG Agencies and 10 GODR institutions. See the following descriptions for the five IR sections in this report for more details.

IR-1 Mitigation of Health Risks

Emergency response interventions included US Ambassador funded potable water and sanitation solutions in emergency shelters executed by Peace Corps and OFDA funded water and sanitation grants to local NGOs. Nearly 40,500 of the most devastated hurricane victims benefited from these interventions immediately following Hurricane Georges.

Under the recovery and reconstruction phases of IR1, 25 integrated health, water and sanitation projects were implemented by 15 NGOs. Additionally, many projects included reactivation of community-level economic activities, disaster preparedness and natural resource management components. These projects achieved the reconstruction of 142 water systems, nearly 18,000 sanitation units and the training of more than 800 Volunteer Health Promoters who do home visits. Preliminary results of many of the project evaluations are showing dramatic decreases in diarrhea prevalence.

IR1 supported the MOH's plans to reduce infant and child mortality by introducing community-level *Integrated Management of Childhood Illnesses Strategy* (IMCI). All primary health NGO projects included IMCI and were integrated with water and sanitation interventions in order to ensure maximum impact.

All implementing partners received specialized training in hygiene behavior change. The training was provided in response to NGO requests to develop capacity and improve NGO effectiveness to impact on child morbidity. The training created a paradigm shift in community-level health promotion, helping NGOs to focus on behaviors which impact on health and effective strategies that achieve the change in behavior. This activity resulted in an additional request to complete formative research in the area of hygiene behavior change. The final product has been wrapped up into a "Hygiene Promoter Kit".

Through the INAPA Pilot Project, the benefits of NGO contracting, community participation and ownership of water and sanitation projects were successfully demonstrated to the Dominican Water Authority. Additionally, this Pilot Project has served as a hands-on practical experience for INAPA in the development of a decentralized approach to rural water supply. Major outputs include a conceptual and policy framework for providing rural water supply using NGOs and third party contractors, an accepted administrative structure with defined roles and responsibilities and a set of technical norms for design, construction and operations of rural water systems that is now in use by INAPA and cooperating NGOs and contractors. Also, working relationships with a number of NGOs have been established and the normative role of INAPA has been accepted. A framework for learning the most appropriate ways to operate and maintain systems has been provided and the Hato Mayor Pilot Project was completed. The first steps to set up a national association or federation of community water associations were taken and the first national conference has taken place. A follow-up meeting took place under INAPA's lead to consolidate the formation of the federation. Training in the use of computers has been provided to INAPA by a local consultant. A manual that details the lessons learned in community participation was produced. Finally, nine demonstration water and sanitation projects highlighting the new alliance among INAPA, NGOs and communities have been successfully completed in nine communities in the eastern region of the Dominican Republic.

Under IR1, USAID responded to the urgent health, water and sanitation needs in more than 90 rural sugarcane worker communities (bateys) affected by Hurricane Georges. These communities were disproportionately affected by the hurricane as their state of dire poverty made them more vulnerable to the disaster. USAID's involvement has helped uncover and understand the abject poverty in these forgotten communities. Major outputs include: the completion, publication and distribution of a comprehensive socio-economic and health survey of this sub-population; co-sponsorship of a high-level workshop-seminar with the Dominican Government's Presidential Plan for Poverty Alleviation in order to bring together all stakeholders and identify actions; the formation of an NGO consortium to implement an integrated model development project in selected communities; the completion of participatory, community diagnostics by the consortium and the drafting of a comprehensive proposal. Additionally, a video was filmed to document USAID's involvement in these communities.

The Center for Disease Control and Prevention (CDC) has strengthened the Epidemiological Surveillance System and improved Community-level Dengue Prevention. The laboratory component has been extended through March 2002: laboratory equipment is currently being installed in the National Laboratory; complementary training is planned for March 2002. Epidemiological Training has been extended through September 2002. CDC is currently developing a joint-country training plan for Haiti and the Dominican Republic.

IR-2 Shelter Restored

Shortly after the hurricane the Mission embarked on an innovative approach to repair and reconstruct houses using salvaged lumber from hurricane-fallen trees. OFDA, provided equipment (portable saw mills, etc) and technical assistance to the Dominican forestry dept. to salvage trees and grants to three local NGOs (FUNDASEP, FUNDASUR and IDDI) to repair and reconstruct 3,356 low income houses and 2,500 latrines in affected areas. Following this

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emergency response period, the Mission shifted its focus to address the large permanent housing deficit exacerbated by the hurricane. The primary construction material moved from wood to concrete block and an effort was made to upgrade water/sanitation facilities. This reconstruction effort was distributed in two phases using US\$8.3 million of supplemental funding: Phase 1 concentrated on repair and reconstruction of houses in-situ. Phase 2 was aimed at constructing new urbanizations for families still living in temporary barracks. USAID entered into a Cooperative Agreement with the Cooperative Housing Foundation (CHF) to coordinate this stage of the Georges Housing Reconstruction Program in the Dominican Republic. The planned targets for CHF were to repair 2,750 houses and reconstruct 2,250 houses. The repair target was later adjusted to 1,541 when the Mission decided to concentrate its efforts on 5 new urbanizations with all basic services. The additional funds released from the repair component would be used to cover some of the basic infrastructure costs. By the end of the project CHF completed a total of 1,555 repairs including 678 families with new water and sanitary facilities. The target for reconstructed houses remained 2,250 units and CHF completed 2,248³ units, of which 1,219 were reconstructed in-situ and the balance in new urbanization sites. In order to accomplish this last stage USAID partnered with other NGOs, the private sector and the GODR to relocate hurricane victims that had been living in GODR-constructed temporary shelters in subhuman conditions for the last three years and who could not go back to their original homes, either because these were washed away or because these sites were more vulnerable after the hurricane. The final number of houses constructed in the five new urbanization sites is distributed as follows:

San Juan de La Maguana	360 units
La Romana	330 “
Beneditco	179 “
El Tamarindo	120 “
Bayaguana	40 “
TOTAL	1,029

This program has been very successful in leveraging counterpart contributions from the GODR, the private sector (hotel association) and the communities involved for an estimated total amount of \$4.5 million. The costs in land and basic services infrastructure account for an estimated 180% of the value of the house. GODR through INVI, INAPA and INAVI have contributed land and funding for basic service infrastructure such as potable water, sanitation, sewage, streets and sidewalks. In one site, the NGO bought the land and in another a local hotel association (Hotel Association of La Romana and Bayahibe) donated the land. NRECA provided electrification services (poles, lines and transformers) in Benedicto, La Romana and el Tamarindo with funding from USAID, their own resources, the GODR and AES, the local private distributor in the project area. NRECA's counterpart contribution for the program is \$680,955, which is 25% in excess of the expected amount.

Other US agencies that contributed to address housing reconstruction in the Dominican Republic were HUD and NIST from the Dept of Commerce. HUD completed a program that included a low-income urban renewal pilot, community disaster preparedness, loan program for housing

³ All these numbers are included in CHF's quarterly report of January 31, 2002

repairs and micro-enterprise, site planning and regional training on improved self-help construction. NIST helped develop a manual for improved construction techniques for hurricane and earthquake resistant low-income housing.

USAID through RUDO/Guatemala helped FONDOVIP, a local NGO, develop a policy reform agenda for low-income housing and to initiate operations for refinancing low-income housing loans in the Dominican Republic. They also conducted the first comprehensive low-income housing demand and supply study in the DR. They were able to secure start-up capital from the GODR and private savings and loans associations for their secondary mortgage discount program. RUDO's investment in technical assistance and policy dialogue amounted to less than US\$300,000 and was able to leverage over US\$3 million of private capital, in local currency for secondary mortgage operations, from the Dominican savings and loan institutions and the National Housing Bank

IR-3 Food Supply Levels Restored

Two cooperating sponsors implemented the program: the American Red Cross (ARC) with its national counterpart, the Dominican Red Cross (DRC), providing monthly rations directly to hurricane victims; and the World Food Program (WFP) with support from the Dominican Government's Pre-Investment Fund working through 158 organizations, the Ministry of Agriculture and the Dominican Institute of Agriculture, to distribute commodities through Food-for-Reconstruction Projects (FFW). WFP's FFW projects were timely and made a very important contribution to the overall recovery and reconstruction efforts.

The ARC program helped alleviate food insecurity, acting as an income transfer to the target population, allowing them to spend scarce resources on self-help housing reconstruction and purchase of domestic goods lost to the hurricane. Additionally, the program's second objective, to strengthen the national society of the DRC to prepare for future disasters, was accomplished, as demonstrated by the unprecedented increase in the number of volunteer workers, from 1,500 to 4,500, in addition to the formation of forty (40) new DRC Municipal Committees.

The more complex WFP/FFW program supported long-term solutions to food insecurity via the Food-for-Agriculture Reactivation component, although the extent of agricultural damage was beyond the capacity of the intervention. Additionally, all actors involved witnessed the institutional strengthening and the increase in the number of local community organizations. Finally, increased community participation and organizational capacity to mobilize this participation were results reported by nearly all implementing organizations.

The WFP program focused on three main FFW activities: (1) agriculture and environment, (2) community infrastructure and (3) reconstruction of housing and sanitation. Small producers were able to clean their farms and initiate the production of food for self-consumption and local markets. The Office of Foreign Disaster Assistance (OFDA) and the Ministry of Agriculture financed plantain and coffee rehabilitation interventions that were complemented by FFW. Damage to community infrastructure was mainly addressed through cleaning and reconstructing unpaved roads, rural roads and reconstruction of aqueducts. Additionally, the reconstruction of houses and sanitation, financed by OFDA, was undertaken by some NGOs.

IR-4 Reactivation of Economic Activities

Agriculture: USDA and USAID collaborated under two different major projects under the overall reconstruction program to help small farmers rehabilitate and repair agricultural resources. Immediately following the hurricane USAID/OFDA financed the rehabilitation of 800 hectares of plantains in the most productive plantain area through land leveling and replanting. The price of a plantain, a major staple in the Dominican diet, jumped from one peso to eight following the hurricane. Production in this region has increased beyond pre-hurricane levels, bringing the prices back down to affordable levels. 5,100 lbs of improved, fast growing vegetable seeds were distributed to 5,100 small farmers to provide immediate relief to the farmers and increase the availability of fresh produce in the market.

This action was followed by an innovative USDA 416b Food Aid program, implemented under an agreement with USAID and two GODR agencies (Sec of Agriculture and STP) which monetized 100,000 tons of wheat to establish a Small Farmer Recovery Fund that provided about 40 grants and technical assistance to NGOs and several GODR agricultural institutions to assist over 90,000 farmers and rehabilitate agricultural infrastructure. The original target was 60,000. A complimentary project, administered by USAID has provided grants through 10 NGOs to assist an additional 12,000 small farmers to recover from the hurricane. The original target was 9,650. The overall results in terms of hectares rehabilitated were: coffee = 5,400; cocoa = 3,000; plantains = 900; fruits/vegetables = 900; forests = 3,700. In terms of replacement animals distributed: chickens = 95,000; cows = 45,000; pigs = 3,900; goats = 4,500; rabbits = 700. Other major results include repair of 130 km of rural market roads; 85 km of irrigation canals; 15 rice factories; 11 marketing centers; national animal and vegetable quarantine centers, and enhanced control of the coffee berry borer beetle, the major coffee pest that was proliferated throughout the country by the hurricane. During the last year of the USAID and USDA programs, marketing assistance was added to help address the increase in production and fluctuating prices. For example, in coffee this included technical assistance, training and several conferences from the Specialty Coffee Association of America, USGS, etc. and the production of a web page for Dominican Specialty coffee.

Electricity: USAID provided \$2.1 million to NRECA International Ltd. to implement the Rehabilitation of Rural Electric Infrastructure in Hurricane-Affected Areas (REIH) Project from August 1999 until December 31, 2001. The project main area of influence was the southeastern portion of the Dominican Republic, where winds completely destroyed the electrical grid, in particular in the towns of Boca del Yuma and San Rafael del Yuma and outlying regions. The project involved unique partnerships among the private sector (AES, the Romana-Bayahibe Hotelier Association, Central Romana Corporation), local government (Municipality of San Rafael del Yuma), the government energy agency Corporación Dominicana de Electricidad (CDE), NGOs, community organizations, final users, and U. S. rural electric cooperative members of the NRECA network. These partnerships were instrumental for project success within the established timeframe. The project exceeded its original targets and, in addition to programmed outputs, NRECA built a power substation, installed electricity distribution systems and provided service for a total of 768 new progressive low-income houses located in three new urbanization sites in La Romana (330), New Padre Nuestro (185), and El Tamarindo (120), and in the towns of San Rafael del Yuma and Boca de Yuma (133).

The REIH project focused on three main activities:

- To rehabilitate the basic transmission lines and distribution systems destroyed by the hurricane for businesses, homes and farms;
- To initiate economic recovery through the promotion of productive electrical uses in commercial and agricultural applications; and
- To restore electricity for community services such as schools, clinics and community water systems through grid extension, internal wiring and renewable energy systems (i.e. solar photovoltaic systems) in remote villages.

Today beneficiary communities have much more hurricane-resistant and reliable electricity service than before the hurricane. As a result, the use of energy for productive applications is growing in those communities. New businesses are flourishing in the project's area of influence, which is contributing to increased income. A savings and loans cooperative was established and the first rural electric cooperative of the Dominican Republic was also established in San Rafael del Yuma. The government-owned Reserve Bank is in the process of installing an office in San Rafael del Yuma. Positive impact is also evidenced with nearly 400 micro-medium size businesses such as small grocery stores, tailor and beauty shops, fish conservation facilities, cheese making factory, restaurants, a large supermarket and others. USAID and partner NRECA also brought electricity supply for the first time to a town that was located under a main distribution line, but the lack of a distribution sub-station made it impossible to take advantage of the proximity of the high tension distribution line. In this town, as in the other towns of the region, the new electricity services have improved the quality of life of the residents and micro-entrepreneurs see new opportunities, i.e. hand-wash laundry services offered by unemployed single mothers, now offer the same service using an electric washing machine. Electricity to schools made possible adult education at night. Electricity from grid extensions or from solar power is currently used to run several community water systems (for domestic and irrigation uses), replacing old unreliable diesel engines. Farmers in the region have improved economic opportunities with irrigation to produce more crops for the high-price hotel industry as well as through the new use of milking machines and small processing plants for cheese. The improved electricity services also provided new and more efficient (compared to diesel generators) opportunities for restaurants and tourist facilities used by the resorts for excursions.

By project's end, electricity was restored to 18,750 beneficiaries, exceeding targets by 56%. Two coops were established to facilitate the productive use of electricity. A revolving fund of \$50,000 was created and made available for productive use for residents of the region. The training sessions on productive uses, line safety and cooperative organization exceeded planned targets by 350%. Ten communities in the southwest benefited from renewable energy installations, including innovative solar-powered water treatment facilities in three of them.

Micro-enterprise: A respected national technical university (INTEC) with a USAID-funded micro-enterprise training program was awarded a grant to provide technical assistance to help micro-enterprise recover from the hurricane and training to a wider group to protect their small businesses from future disasters. The most gratifying impact is to see many people renew their

hope and enthusiasm to either reopen or continue their businesses after being affected by the hurricane. The program was so popular that the original target of 3,000 micro-businesses assisted was exceeded by almost 100%. To accomplish this, INTEC/CAMPE trained 115 facilitators, established a curriculum, established a network of over 20 NGOs to participate and developed 12 programs for national radio on disaster preparedness.

IR-5 Disasters Mitigated

The emergency management system in the Dominican Republic has improved significantly through the coordinated efforts of FEMA, USAID/OFDA and the Inter-American Development Bank. USAID contracted International Resource Group to coordinate other US Government agency efforts in disaster mitigation and to provide technical assistance to strengthen the capacity and readiness of national and community-based organizations to help the population prepare for and cope with future disasters. At the national level FEMA coordinated with the GODR and designed the National Emergency Operation Center. FEMA also assisted the City of Santo Domingo in its design of the municipal level EOC. OFDA provided technical assistance and training to develop the EOC procedural manual and carry out two simulation exercises. The IDB provided loan funds to the GODR to install and equip the country's first Emergency Operations Center. NOAA assisted the National Weather Service prepare a proposal for an early warning system also financed by the IDB loan. NOAA also developed a decision-making tool for reservoir management. NIST worked with the Public Works office to develop a manual for assessing critical structures for seismic vulnerability and developed a user-friendly guide to assist the informal sector and small contractors in constructing houses that are more resistant to natural hazards. As a result of the new EOC, the specialized technical assistance and training and the efforts made to improve coordination within all of the institutions that make up the National Emergency Commission, the ability of the GODR to respond to another hurricane has vastly improved.

At the community level, IRG coordinated efforts to support three highly vulnerable riverfront barrios (approximately 150,000 people) and led them through a community based, participatory model to develop and carry out community mitigation plans, including the construction of 40 public works to facilitate an emergency evacuation. The community model was based on an adaptation of FEMA's Project Impact model. The technical input for the plans was provided by the Housing and Urban Development agency (HUD), which paid for seismic studies and USAID's contractor, the US Army Corps of Engineers, who provided flood studies and maps. USAID also financed disaster awareness and preparedness training for 2,396 community leaders from 82 communities and 69 villages. FEMA's local contractor, the Dominican Disaster Mitigation Association will continue to provide support to these projects.

Ten NGO grants resulted in 7,959 hectares of land treated with soil conservation practices, including reforestation. The joint USDA/USAID program funded with 416b food aid also reforested 1,086 hectares of hillsides.

The US Forest Service fomented a good working relation between the Dominican Forestry Dept and the International Institute of Tropical Forestry, located in Puerto Rico. The program provided equipment, training and technical assistance to SUREF in the areas of wood salvaging, forestry management (including pest control), fire management, urban forestry (this also

included assistance to three municipalities and two major cities), and improved communications. As a result SUREF developed new priorities, which includes all of the core areas included under the USFS rehabilitation program mentioned above. The first management plan for a national forest is being developed for the Sabana Clara national forest, located near the Haitian border. The fire brigade is better prepared to prevent and fight forest fires. Urban forestry has taken on new importance and prominence within the country. The salvaging program was successful as with the provision of several portable sawmills, tractor and truck millions of board feet were milled from fallen pine trees to be used by several NGOs repairing and constructing houses and latrines. The fallen pine trees were still apt for lumber one year after the hurricane.

At the National level, a Logistics Management system for medical and emergency supplies was established in two pilot sites. The system allows the Civil Defense to have a computerized inventory of emergency supplies in regional warehouses that can be easily and quickly dispatched to affected areas in need. In support of this project, the US Military group has included the construction of 5 regional warehouses and supplies in its Humanitarian Assistance Program proposal for 2003.

A dam safety program was developed by the USACE under contract with USAID. Several public and private institutions (INDRHI, CDE, Civil Defense, Army, Meteorología, COLD-Dom and several private sector consultants) worked with USACE to develop a coordinated plan. As a result dam safety has become a priority issue for the National Institute for Hydraulic Resources and several participating public and private institutions. INDRHI is currently preparing a proposal to for an international loan to support the program. As part of the training under the program USACE structural engineers, along with INDRHI engineers, conducted inspections of three major dams and evaluated the tailings dams from a gold mine operation (Rosario Dominicana Gold Mine) to determine the possible environmental impact. Flood maps (2 - 100 years) were produced for the Ozama and Isabela rivers in Santo Domingo and the Yuna and Camu rivers near La Vega and Bonao. This information will have an impact on disaster mitigation programs being implemented in the highly populated barrios along the riverbanks in Santo Domingo and on urban plans to be developed along the sections of the river studied in both areas. Training was provided to GODR (INDRHI) and NGO personnel on dam inspections, evaluation of flood risks using the information in flood studies, disaster preparedness plans, and rural road maintenance.

The Dominican National Emergency Commission hosted and participated in OFDA's Disaster Management and Damage Assessment courses. Technical assistance and equipment have been provided to the Civil Defense training department to continue this training.

The USGS produced a land-use map to be used by the Natural Resource Secretariat to monitor and control environmental degradation.

7. Prospects for long-term sustainability of impact and principle threats to sustainability

All of the activities under the Reconstruction Program involved beneficiaries to the greatest extent possible in the reconstruction and rehabilitation of their lives and community

infrastructure. All beneficiaries and implementing agencies have also been provided with training and manuals that will help them to continue improving the products of our combined efforts, after project funding ends. Partnerships were formed wherever possible between participating communities, NGOs, the public sector and, in some instances, the commercial sector to help assure sustainability. In all instances infrastructure, houses, farms, etc. were rehabilitated and reconstructed with the criteria of being able to withstand another hurricane.

IR-1 Mitigation of Health Risks

All 142 water systems were reconstructed with maximum feasible participation from the beneficiary communities. Additionally, all systems are community operated by locally elected community water committees that were trained in community organization, system maintenance and basic finance. Prospects for continued action by the Volunteer Health Promoters is high as monitoring visits completed six months after some relief phase projects closed-out confirm that many Promoters are still active. One USPVO has budgeted over US\$500,000 to continue primary health care interventions in all project communities where they work as well as expand the model implemented under the Reconstruction Program to additional communities for the next two to three years. Another eight NGOs are being awarded grants under the USDA Global Food for Education Initiative, continuing and/or expanding many interventions initiated under IR1 of the Reconstruction Program.

The "Hygiene Promoter Kit" developed under IR1 has been included in the Ministry of Health's National Strategy for the Reduction of Child Mortality. While under RECON the interventions was limited to a small pilot area, plans are well underway to expand coverage nationally, principally through the network of over 800 NGO Volunteer Health Promoters developed and trained under IR1. All grants awarded under the USDA Global Food for Education Initiative will incorporate education in hygiene.

The Dominican Water Authority (INAPA) has already independently contracted two NGOs to construct water systems instead of private companies and is now providing training to communities in organization, operation and maintenance of rural water systems. Additionally, high-level authorities of this institution have repeatedly expressed interest in continuing this practice.

The GODR's Presidential Plan for Poverty Alleviation has charged the newly formed NGO consortium with planning and implementing a campaign against poverty in the sugarcane worker communities (bateys). With the abject poverty of the bateys exposed, the United Nation's International Fund for Agricultural Development has begun planning US\$15-20 million integrated development project targeting these communities. The newly formed NGO consortium could make a major contribution towards transforming the bateys.

IR-2 Shelter Restored

The first response from the US Government in the shelter component that had a great impact and should be replicated under similar disaster conditions was the work done to salvage fallen trees for the construction of temporary shelters. This not only complemented the work of the GODR/INVI, who provided zinc sheets to build shelters, but also avoided a higher incidence of disease and insect damage (i.e. the ips beetle) in the forests and reduced the risk of fires by

reducing the amount of debris and combustible material left by the hurricane. The second phase of the Shelter component was very much in line with the reconstruction phase of the whole program, which aimed to bring back the country towards sustainable development and continued economic growth by investing in people. USAID took the lead with numerous NGOs and the GODR to address the poor people's housing situation caused and exacerbated by the hurricane. The program demonstrated the effectiveness of forming alliances between NGOs, the GODR, communities and the for-profit private sector as the various participating organizations leveraged each other's resources to accomplish synergy and greater, more sustainable results. One example of this was in Benedicto where the GODR teamed with several NGOs (IDDI, CHF, NRECA) and the private sector (hotel association, power company, local sugar company-central Romana) to relocate a whole community of 185 families to a more secure and more convenient location. The partnership with the local government, private sector and NGOs was very successful and brought in additional counterpart participation; this new focus on people also provided a positive experience for the GODR to emphasize community organization and involvement. The beneficiary communities have been organized in different committees that would oversee the normal functioning of these new urbanization sites, i.e. committees that will collect for basic services costs such as water and electricity. USAID strengthened NGOs and GODR in construction techniques by introducing a modular technique to construct the low-income urbanization sites; this technique proved more time efficient and cost effective than the traditional construction methods used by GODR, NGOs and contractors. The houses built under the project were more economical per square footage than any other low-income construction in the country and all the sanitation services were included reinforcing the concept of indoor plumbing in progressive low-income construction. In addition, the concept of progressive houses in an efficient, low-cost urbanization design was introduced and the GODR is making plans to replicate this model in the immediate future to comply with the President's commitment of supplying the poor population with 60,000 low-income houses for year 2002.

The second major beneficiary group that would contribute with sustainability to this component is the intermediate customer group, which includes the housing developers and NGOs who participate in the design, development and delivery of housing projects and services to the poor. They will benefit from USG provided resources and from the experience gained in the development of housing solutions for low-income families and in setting building standards for hurricane resistant housing.

Despite the successful community organization work, the demonstrated positive results of inter-sectorial alliances and a model for low income progressive housing, a financial mechanism, such as a cost recovery program to support a rotating housing loan fund, was not created to sustain the low-income housing reconstruction program. In the majority of cases, the houses were given to beneficiaries who provided a certain amount of sweat equity. Only one of the participating NGOs, Fundasep in San Juan, decided to recover part of the housing cost from the beneficiaries. Thus, although the houses and service infrastructure that were constructed will remain, the housing construction program will not continue.

HUD initiated a credit fund for housing repairs within a local NGO (FDD) which should continue after the project ends. USAID/RUDO helped a local NGO (FONDOVIP) to create a second level mortgage discount facility for low income mortgages with funding from the public

and private sectors which should continue generating funds for low income housing construction and repairs.

IR-3 Food Supply Levels Restored

The American Red Cross implemented a direct feeding program, which has no long-term sustainability for the beneficiaries. However, numerous implementing organizations, including the Dominican Red Cross reported that their participation in the Food Aid Program contributed to the strengthening of the institution and will increase their future capacity to execute projects with or without food aid. Furthermore, all recovery and reconstruction activities supported by the WFP/FFW program, with the exception of cleaning and reconstruction of rural roads, are completely sustainable.

IR-4 Reactivation of Economic Activities

Agriculture: Production levels should continue to improve as new plants and cultivation techniques have been introduced, numerous nurseries have been started, shade trees planted, diseases controlled and organic fertilizer sold on a commercial basis by the farmers. For example, a new side grafting technique was introduced that enables cocoa farmers to replicate their best producing trees within one year. The training that was provided to farmers to improve production will remain. Revolving credit funds have been initiated by participating NGOs in several sectors, such as coffee and cocoa. However, long-term sustainability of impact in the agricultural sector hinges on the ability of farmers to sell their crops at an acceptable price. Efforts have been launched in coffee, cocoa and plantains to improve competitiveness by focusing on quality, post-harvest handling and marketing. There was a concerted effort started two years ago, involving the public sector (CODOCAFE and IDIAF), the private sector (Adocafe, Fundocafe, Specialty Coffee Association of America and a private processor, Urecafe) and farmer associations to focus on production, post-harvest handling and marketing of specialty coffees (organic, bird-friendly, gourmet) for the niche markets in the US, Europe and Japan. A web page is being produced that will enable buyers to purchase specialty coffee directly from certain regions of the country, similar to the wine industry. While it is headed in the right direction and has acquired certain momentum, this coffee initiative requires additional assistance and time before it can stand on its own. Similar alliances have been formed in cocoa to enhance quality and acceptability of quality Dominican cocoa. That alliance involves the largest federation of cocoa farmers in the country (Conacado), the GODR cocoa institute, the largest private exporter of cocoa (Rizek), the Dominican cocoa research institute (IDIAF) and the American Cocoa Research Institute (ACRI), who agreed to continue to provide technical assistance after the project ends.

Electricity: The reconstructed electrical distribution systems corrected the main failures of the pre-hurricane systems, which were poorly designed and caused much damage to electrical equipment, due to low voltage and frequent outages. Improvements in service, coupled with the installation of new meters, have provided a favorable climate for sustainability, as clients are more apt to pay for quality reliable service. This new rehabilitated system is the first one in the Dominican Republic to attain US standards for voltage levels. Before the REIH project electricity bills were commonly issued as if the service had been provided on a regular basis, although in reality it was only received about 6 hours per day or less. The new system was also made to last longer, requiring less maintenance, as NRECA used materials more resistant to salt

water damage (stainless steel cables, guidelines and transformers) and treated wooden-poles that are more resistant to insect damage and rotting. The poles were also placed into the ground deeper than before so that they are able to withstand 115 mph winds. The combination of these technical and administrative improvements contributes to a more durable, sustainable electric distribution system. Another contribution to long term sustainability of the REIH project is the creation of an electricity consumer cooperative that functions as a collection and billing center for AES, performing additional services such as meter reading, connections and disconnections, meter verification, ground and internal wiring. The location of the coop will save residents from traveling 35 miles to initiate service hook up, pay bills, etc. Another cooperative was strengthened by NRECA in San Rafael del Yuma that will function as the only financial credit institution in the region. The project provided this coop with \$50,000 seed capital for the purpose of providing loans to members for productive uses of electricity in the region.

The partnership forged between NRECA, AES and CDE has proven beneficial for all partners, as AES improves service delivery and collections in this region, while reliable electrical service is expanded into additional under-served rural areas. This successful model forms the basis for continued USAID involvement in rural electrification in the country. A project is being developed involving the three partners to continue expanding electrical services to other areas in the East.

Micro-enterprise: The micro-enterprise disaster mitigation and preparedness program is poised to be replicated whenever necessary. Facilitators have been trained, an NGO network formed, training materials prepared and radio programs developed that can be continued or reactivated when desired. The determining factor is the availability of funding and/or sponsors

IR-5 Disasters Mitigated

The community-based disaster mitigation model is sustainable as it strengthened already existent organizations and groups in the community; local civil defense brigades, women's and youth groups, church affiliations and other. By including the community leaders in a participatory process, community priorities were established and community ownership of the process ensured. Infrastructure constructed in poor, densely populated communities, such as footbridges, covered drainage ditches, walkways, retaining walls, steps, handrails, etc should last for many years and serve as an incentive for residents to continue improving their environment. The GODR is interested in expending this program to other densely populated areas of the country, including other sections of the Santo Domingo riverfront communities. Currently, IDB funds (\$158,000) are being used to fund additional emergency infrastructure work that the USAID Reconstruction Program was not able to complete in these communities for lack of additional funds and time. USAID was just able to focus on the most critical work (Plan A) as identified by the community residents. IDB is picking up with Plan B infrastructure.

Disaster preparation and response at the national level should continue to improve as Civil Defense and the newly created Emergency Operations Center becomes functional in April 2002. Much of the success in the future will depend on funding levels from the GODR and continuous upgrading and training programs for emergency staff and institutions participating on the National Emergency Commission. Improved coordination among these institutions is also key to adequate disaster response at the national level. Continued technical assistance and training from

USAID/OFDA for Dominican personnel within the national program will help assure that the national program continues to progress. Efforts should be intensified to continue linking the national program with municipal and community disaster mitigation programs. Currently the GODR is very interested in its Emergency Management system as demonstrated by the amount of IDB loan funds invested.

The disaster logistic management system is well established in two regions (Santo Domingo and La Vega). Local Civil Defense employees and participating community members are trained in all aspects of inventory management and control. There are enough people trained as trainers to ensure sustainability of the program in these two sites. Expansion of the pilot program to other areas is dependent on additional funds. The US military has included supplies and the construction of five regional warehouses in its 2003 proposal. If this request is approved, project sustainability and expansion is more likely.

Soil conservation measures should be sustainable and replicated as participating farmers experience tangible positive differences on their land. However, there is a real threat to soil stability in the country as farmers abandon coffee plantations because of market conditions. A concerted national effort should be launched (expanding the specialty coffee initiative supported by the reconstruction program) to help farmers realize better prices for their quality coffee and/or help farmers to, either switch to other less destructive crops such as fruit trees, or to practice other soil conservation methods for annual cash crops that they would be more likely to cultivate.

The Dominican forestry department (SUREF) was strengthened in several areas as mentioned in other sections of this report such as fire, management, communications, etc. The training and technical assistance provided by USFS under the program will stay within SUREF as long as those individuals are still employed by the department. However, the manuals, infrastructure, equipment, studies and plans should remain for future use. This points out the need for continuing the relationship between the USFS, International Institute for Tropical Forestry and SUREF. SUREF personnel need to complete the management plan for the Sabana Clara forest. They may need additional assistance for this.

Sustainability of the Dam Safety program depends on the ability of the GODR to fund implementation of the program and retain trained personnel in INDRHI. The reports on the three dams inspected should serve as a model for future assessments. Due to the importance of the program to prevent loss of lives and property, the Dominican Government is seeking funding from other donors to fully implement it. Equipment and vehicles for continuation of this activity have already been purchased under a program funded by the World Bank. INDRHI is negotiating with the French government to obtain a loan that would implement the dam safety program.

Sustainability of the new NIST program on structural assessments of critical buildings will depend on continued GODR funding and retention of trained personnel within the Secretary of Public Works. However, the manual should serve to orient new personnel. Public Works plans to open a special office to evaluate resistance of buildings to hurricane and earthquakes.

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The early warning proposal presented to Oficina Nacional de Meteorología by NOAA served as the basic document to obtain funding from the World Bank to implement this program. At present, the loan request is waiting the "no-objection" from the World Bank to start the bidding process for the purchase of needed equipment. Counterpart funds for the construction of infrastructure required for the equipment is still pending.

8. Lessons learned for application to other SOs, including follow-on SOs in the same country or sector and similar SOs in other countries.

There are a number of lessons learned in general and in all of the IRs that could improve overall effectiveness and sustainability of the program.

General:

The design of the Relief/Reconstruction Program proved effective at mitigating the affects of Hurricane Georges. The Mission made the right decision through each phase of the program to focus on people, encourage community participation (even though this caused some delays), build back better, design integrated projects wherever possible, encourage institutional alliances and integrate preparedness at each stage. The strategy to build the program on the foundations and strengths already achieved by the Mission through the regular development program was paramount to the overall success of the program. For example, in order to directly reach communities devastated by the hurricane in the shortest amount of time, the Mission decided to use the broad NGO base established under its PVO Co-financing Project, which strengthened over 50 Dominican NGOs. This decision also helped to assure sustainability of the activities as communities participated in the designs and implementation. The NGOs selected passed the difficult test of spending two times their normal budget in half the normal time and in a transparent, sustainable manner that surpassed all planned results with almost no audit findings. They were also able to provide substantial amounts of counterpart to the effort, including contributions from beneficiaries, the government and other donors.

Under every IR, the Mission sought to build alliances between communities, NGOs, private sector and government. Although it takes time to build these partnerships, this shared responsibility is the most effective way to leverage additional resources and assure sustainability of results. (see the IR sections below for specific examples).

Partnering directly with government agencies must be done with caution. Only government agencies with proven track records dealing with donor funds should be used, and to the extent possible, host government counterpart funds should be placed in a trust account before or early during implementation. For example, the potable water pilot project implemented by several NGOs and the National Water Authority, INAPA, had no problems securing counterpart funds on time, whereas the new urbanization housing projects were all delayed for lack of timely counterpart funds from participating government institutions (see the IR sections for health and housing for details).

Partnering with the commercial private sector is feasible when the company can realize an economic interest to contribute. This was the case with the projects to rehabilitate electric distribution systems and some cash crops.

Sustainability should not be an after-thought for reconstruction programs. In its concern that Reconstruction not be confused with a regular development program USAID/W did not make it clear whether the Mission should or could focus on long-term sustainability of program activities. The Mission hedged and included some elements of sustainability, such as community

and beneficiary participation, allowing the use of revolving funds in some cases and requiring some degree of cost share. It should be made clear from the onset that sustainability is an objective of a reconstruction program at every stage and in every component.

While preparedness was encouraged for every activity financed under the program, it should not be left for chance and should be a mandatory criterion affecting project selection. For example, every community that benefited from a water system or housing project should have included training in disaster preparedness and developed a disaster mitigation plan.

The procurement mechanism to award grants to participating NGOs could have been accelerated and simplified by selecting one or two major contractors or grantees with the authority to award and oversee the subsequent sub grants. The Mission decided to award all grants directly and use the same institutional contractors used under the ongoing PVO Co-Financing Project to implement the community rehabilitation portion of the program. While this had tremendous benefits in terms of momentum and experience, the processing time to award grants could have been reduced and the administrative burden lessened on the Mission by using an umbrella mechanism to award grants by IR or by region. In order to save a couple of months, the Mission should have conducted the procurement process for implementing partners prior to actually receiving the funds.

The use of other USG Agencies had mixed results. In general, those federal agencies with overseas experience fared better and were much easier to coordinate than the rookies. Another general statement is that those agencies that received their reconstruction funds through USAID were much easier to coordinate with and more receptive to teamwork in order to achieve common USG reconstruction objectives. (See IR summaries for more details). Future reconstruction efforts should limit the number of other USG Agencies to only those needed to achieve the program objectives of the Mission. The joint program with USDA to implement the small farmer recovery program, financed with food aid proved to be very affective, a program that could be a model for replication in other countries and circumstances. USGS, USFS and NIST also coordinated very well with the Mission program.

Sufficient time to effectively implement each phase of the relief/recovery/reconstruction program should be granted to each mission starting after the reception of funds at post. In this case, the emergency and recovery phases had the right amount of time (three months and one year respectively) but the time frame allowed for the reconstruction portion of the program was not sufficient to fully take advantage of synergies with other partners and donors. Everyone was in a rush to spend the funds they received almost a year after the event, without enough consideration for sustainability and coordination.

Following is a brief description of the major lessons for each IR:

IR-1 Mitigation of Health Risks

IR1 was comprised of 27 management units, 23 of which were directly managed by the Health, Water and Sanitation Program Manager. While a contractor, ENTRENA, provided monitoring and technical support to all NGO grants, an enormous administrative burden was placed on

USAID. Perhaps an alternative design for any future emergency, response or time-limited reconstruction program would be to use a contractor to award sub-grants.

The community participation built into the design of IR1 added substantial value to the program. All NGO grantees included beneficiary counterpart contribution, in the form of unskilled labor, in their budgets and grant agreements. This made the NGOs accountable for inclusion of beneficiaries in the execution of the projects. Total beneficiary counterpart under IR1 was approximately US\$1.9 million, thus maximizing USG investments. Perhaps more important, participation created a sense of project ownership among beneficiaries, thus increasing prospects for sustainability while not fostering paternalism. Community participation should be an integral part of any recovery or reconstruction program.

Raising the standard on water system construction to include household connections exponentially increased the beneficiary monthly quota payment, thus guaranteeing financing for future repairs of the system and sustainability. Furthermore, increased per capita water consumption that accompanies household water connections has a direct relationship with improved hygiene and reduced diarrhea prevalence. The sustainability and health benefits of water systems with household connections far outweigh minor cost increases.

Despite skepticism about the GODR's interest in new approaches, the Dominican Water Authority has risen to the occasion to work effectively with NGOs in a contractual relationship in order to provide potable water to the rural population, to embrace the total community participation methodology to achieve sustainability and community ownership, and to integrate basic hygiene education as an essential element to achieve maximum health impact.

IR-2 Shelter Restored

The use of felled trees to construct temporary houses proved to have a two-fold benefit as it provided badly-needed, low cost construction material and reduced the incidence of wide spread disease and fire within national forests. The lumber salvaged from blown down and damaged trees compensated for the low availability of construction material in the aftermath of the hurricane. USAID/OFDA helped with portable sawmills, tractors, a truck, equipment and technical assistance to clean up the national forest where most of the trees were taken from. Three sub-grantees were selected to use this lumber to reconstruct housing units. The correction to make in future similar situations would be not to use the GODR as a partner to salvage and mill the trees. They were not very efficient, very difficult to monitor and control and they did not comply with the timeframe nor with expected results by not providing the agreed amounts of lumber at the agreed times. We would recommend hiring a private firm to salvage the damaged trees and mill them for delivery to the sub-grantee NGOs, the role of the GODR would be to oversee the extraction and origin of the trees to be milled.

The use of NGOs to repair and construct proved efficient. They learned improved construction techniques and were able to distribute the work within the communities in a very effective and fast manner.

The focus on new low cost progressive homes in new urbanizations was a good model for low-income housing. The applied construction methodology proved to be the most adequate and cost

efficient, making these houses the most economic per constructed square foot. The race against the clock could not have been won without this modular technology. We are building back better with all essential services and block construction, which could not always be done with the in-situ reconstruction. All houses, temporary and permanent were constructed to resist heavy winds. Contrasting with some GODR low-income housing developments, USAID emphasized that all houses be constructed with appropriate water and sanitation infrastructure.

Families in disaster prone zones were relocated to less risky areas. Family relocation entangles a series of problems and objections from the moving families, but for RECON it was less problematic because it took advantage of the emergency relief situation, which facilitated to better relocate the affected population to higher ground and/or areas that presented less risk under disaster conditions.

A faster contracting mechanism should be used under emergency and reconstruction responses. The lengthy process for contracting for regular program activities should not be applicable when an immediate response is paramount. For USAID management purposes a contract instrument with clearly stipulated deliverables and time frames is recommended rather than a grant. The results under this component met targets basically because of the positive disposition from the grantee, CHF, to adjust and accommodate to changes in strategy.

The decision to reconstruct houses in new urbanization sites should have been taken earlier to begin construction with more realistic timeframes. The short implementation period for construction created too much pressure with GODR partners, in spite of providing resources in record time for government standards, it did not catch-up with the hectic rhythm of the RECON Program. If similar time restrictions are placed for similar experiences in the future, results should not be so dependent on the GODR, as was the case for the basic services infrastructure under the current program. This leaves two options, either to cover those costs with own (controllable) funding sources, which would significantly reduce the number of housing units to build, or to secure GODR funds by placing them in a trust fund to make them available, when needed.

Local housing NGOs need to improve their ability to deal with and handle basic infrastructure services (water, sanitation, electricity) for more effective integrated projects

There is very little replication possible with this project as most of the new houses were given away. Only one of the participating NGOs, Fundasep in San Juan, decided to require some degree of cash reimbursement by the beneficiary. The focus of this program was entirely on the immediate reconstruction results. There should have been a cost recovery mechanism for all NGOs so that a portion of funds would replenish a rotating fund dedicated to leverage additional funding to build more homes.

CHF should have restricted the number of housing models to two or three instead of leaving it up to whatever model the NGOs wanted to build. This standardization would have made the projects move quicker and possibly reduced costs.

CHF should have hired a larger technical staff to enable it to provide closer field supervision.

The size of the units should have been a bit larger. We only allowed \$2,500 per house at the beginning. This was later increased to \$3,000. This was only enough for a 20-m² house that was later increased to 28 m². The minimum size house should have been 28 m² right from the start. There could have been a larger model for those NGOs that were willing to provide additional counterpart.

Coordination with HUD was not good! We could have done a lot more good by working together.

IR-3 Food Supply Levels Restored

Emergency Food Aid should be combined with recovery and reconstruction activities via Food-for-Work in order to stimulate community participation, accelerate activities, and maximize recovery and reconstruction investments.

The Food for Work Program (FFW) was widely accepted by the beneficiaries. Many FFW projects had to rotate participation as demand exceeded the commodity supply. Additionally, the program provided the poorest, unemployed hurricane victims the opportunity to participate in their own recovery. FFW beneficiaries set aside monthly rations from their own allotment to be given to community members who were not able to work, such as women with small children, pregnant and lactating mothers, the sick and elderly.

IR-4 Reactivation of Economic Activities

Agriculture: The 416b administrative mechanism introduced under this program worked beautifully and is an excellent model that can be used under similar circumstances anywhere in the world for reconstruction or development efforts. It is a good vehicle for the USDA and USAID to provide the best they have to offer in order to achieve desired humanitarian relief or developmental objectives for the USG. Two items that could be improved are to be more critical in the selection of NGOs and more intense project monitoring by the host-country implementing agency.

The use of a solid NGO base in the case of the USAID program was beneficial in terms of surpassing the objectives in record time with minimal audit findings.

The formation of alliances between the public and private sectors, coupled with heavy participation by the beneficiaries improved sustainability.

The overall program design proved effective. The immediate emphasis after a disaster should be on fast growing cash crops for the local market, such as vegetables and plantains. The program intentionally did this. Then, the emphasis should be on longer-term small farmer cash crops such as coffee and cocoa. While this portion of the program was demand driven, in the future it should be intentional.

Both the 416b and the USAID programs awarded grants directly to participating NGOs. The use of an umbrella granting mechanism would have reduced the processing time for grant awards

and reduced the management burden on USAID and STP, the GODR implementing agency for the 416b Program.

Since the Reconstruction Program was touted as an "emergency program" USAID/W did not want the focus to be development oriented and, as such, sustainability was not to be stressed. This is a mistake! In an effort to build back better and prepare beneficiaries to deal with a future event, all of the activities financed under the program should be sustainable. Thus, counterpart should be required and the initiation of revolving credit funds encouraged. Assistance with post-harvest handling and marketing should be included in the mix of activities from the onset of the program.

Electricity:

Partnerships (private sector/government/NGO/community organizations/ beneficiaries) are key for successful rural electrification projects.

Good coordination among implementers (housing, electricity, infrastructure services) is key for the successful completion of projects.

Involving the Municipality of San Rafael del Yuma had a great impact at mobilizing other sectors to contribute and actively participate.

A well-done electricity project generates confidence and increases interest for investment, thus improving economic development.

Rural electrification is crucial for rural development. Emphasis on the productive use of electricity generates a real change in the economic development of rural communities.

Community participation from the beginning of the project is a key factor for successful projects. Outstanding examples of this are Benerito, Los Jobitos and Los Charcos.

Government/CDE involvement was positive. However, when the government will be involved in providing counterpart it is important to have a long enough lead time for project implementation.

While implementing the REIH Program, NRECA applied its years of accumulated expertise in line design to build rural electric lines that are robust and more disaster-resistant, that comply with or exceed international safety standards, while at the same time using least-cost design parameters that optimized the use of USAID funds.

The transfer of know-how is a key element for ongoing maintenance and future project implementation. Training to technicians from different sectors was provided in a formal way through seminars and also as hands-on training during the whole reconstruction process. Under the REIH Program, NRECA brought in experienced linemen from its cooperatives in the USA who worked elbow to elbow with local technicians from the government (CDE), private sector (AES) and the community. For the stand-alone photovoltaic systems off grid, training was provided to partnering NGO and community beneficiaries to run and maintain the systems.

Innovative methods for accelerating procurement contributed to reducing project costs and complying with extremely tight deadlines. To make this happen, NRECA took full advantage of the new Internet purchasing capabilities.

Micro-enterprise: It is very important to involve development NGOs as full partners in the program, especially those that provide micro-enterprise credit. They are more apt to reschedule loans following a disaster to help their clients survive if the microentrepreneurs have received some training to go with the loan. The development of standard written and audio material (manuals, curriculum, radio programs) taken from real life experiences of many businesses is essential to gain acceptance, credibility and to rapidly diffuse the material. The project would have been much more effective if implemented immediately after the hurricane instead of a year after when the funding arrived. The assistance arrived too late to rescue or resuscitate many businesses. This type of project should be standard for all countries in disaster prone regions.

IR-5 Disasters Mitigated

Instrumental and fundamental to the success of the Community Vulnerability Reduction project was its grassroots participatory approach closely integrating the technical and “process” elements. The four pillars of the project were: basic community organization; technical studies as the basis for identifying reduction priorities; use of participatory processes to engage local stakeholders; and project plans as the basis for action taking and resource allocation.

The community vulnerability reduction project was highly ambitious for the actual timeframe, about 18 months, particularly in light of the use of participatory processes that generally require a more extended timeframe for implementation.

The other USG agencies participating in the Reconstruction disaster mitigation component, NIST, NOAA, FEMA, and USACE, provided valuable specialized technical assistance to support projects. However, the fact that these agencies did not have experience working in the Dominican Republic, and did not have in-country personnel created an extra burden on USAID. Any future reconstruction program should be careful in its selection of other USG Agencies and require an in-country presence to manage the activities, depending on the complexity of the program. To be more effective, representatives from these other USG agencies must integrate and interact better with their local counterpart agencies and follow-up on implementation of activities. NIST was more effective than the others listed above in this regard as they made sure to integrate critical host country personnel into the program. For example, they produced a draft of a manual for structural assessments of critical emergency buildings based upon close consultation with existing Dominican construction regulatory agencies, leading universities, government authorities and private engineers. Once the draft was checked and approved by all parties involved, they issued the guide and provided theoretical and practical training to representatives of the different sectors. In the case of USACE, they must place much more emphasis on effective integration with host country institutions and delivering quality products within the agreed schedule.

Many portable saw mills were imported into the country after the hurricane to take advantage of the downed timber and to save investments. This was done without the existence of a clear national policy on commercial forestry. The GODR needs to develop a clear strategy for culling and salvaging trees from national forests. The government salvaging operation had its problems getting started and with supplying the required quantities of lumber for the housing sites. The lumber was not given enough time to properly cure. The lumber must also be given at least three months to dry before using for housing construction. It is recommended that next time around the salvaging operation be contracted out to a private firm. This will avoid having to start from scratch with the government operation and better guarantee delivery of lumber at the appropriate times. There should also be a plan for storing trees until needed in order to prolong their usefulness.

The USFS Forestry Rehabilitation Program should have had a full-time resident project manager. There was a part time local hire who did a good job, but a full time person could have completed the job much quicker. USAID should not sign a contract with a partner that does not have in-country representation for a major program.

9. Summary of performance indicators used and an assessment of their relative usefulness for performance management and reporting

The Mission chose to directly help the most affected Dominicans to recover from the hurricane. All of the performance indicators were chosen to reflect the measure of success in reaching the number of beneficiaries targeted for each IR. This proved to be a very effective way of assessing performance of our partners throughout implementation and of reporting progress.

The performance indicators selected for IR1 were the total number of people in impacted communities with access to reconstructed potable water systems and sanitation systems as well as those receiving re-established primary health care services. These indicators were extremely useful for monitoring and reporting purposes.

The performance indicators selected for IR2 were the total number of houses repaired/retrofitted and number of houses constructed. An additional indicator should have included the number of beneficiaries that were reached with community organization and training, this in order to reflect a titanic effort made by USAID and partners when working with the poorest and somehow the most conflictive sector of the population. This human factor is not necessarily reflected in the IR2 indicators.

The performance indicator selected for IR3 was the number of hurricane victims receiving rations through ARC and WFP. Under the ARC program, this indicator was very appropriate, as beneficiaries remained the same throughout the life of the program. Under the WFP/FFW program, however, beneficiaries changed over time as completed recovery and reconstruction projects closed-out and new projects began. Additionally, NGOs often rotated beneficiaries in order to open participation, thus allowing everybody who wanted to work to do so. Perhaps additional indicators for future Reconstruction FFW programs which track products would be useful (i.e. houses rebuilt, acres of land replanted, aqueducts reconstructed, etc.) WFP/FFW

beneficiaries received rations based on their participation in the projects. Perhaps a more useful indicator for the WFP program would have been hours worked.

The performance indicator for IR4 focused on the number of small farmers receiving assistance to rehabilitate their farms. Given the diversity of projects under this IR, this indicator was a common denominator and useful for monitoring and reporting purposes. The Mission also monitored the number of beneficiaries under the electricity and micro-enterprise components of the IR.

The performance indicator used for IR5 used to measure disaster mitigation was the number of hectares of land treated with soil conservation practices, including reforestation. This indicator was useful in monitoring the NGO soil conservation activities, but left out a major portion of the IR program, to improve disaster preparation. A more useful indicator could have been the number of communities with disaster response plans or the number of people better prepared to deal with another hurricane.

10. List of evaluations and special studies conducted during the life of the SPO

- Annual Reports to USAID/W
- Quarterly Newsletter and Narrative submitted to USAID/W
- Annual Mission Performance Plans submitted to State Dept.
- Independent Case Study of 416b Program
- Final report from the 416b Program implementing agency (STP and USDA)
- Final Evaluations from various partners (due 3/31/02)
- Final Reports from the various USAID-funded contractors, grantees and cooperative agreements (due 2/28/02)
- Final Reports from the Other USG Agencies participating in the program
- Food Security Assessment (Sullivan, Tejada and Mena, 1999)
- Emergency Title II Food Assistance Program Evaluation (Tejada and Bueno, 2000)
- Socio-economic and Health Survey of the State Sugarcane Worker Communities (Tejada, 2001)
- Formative Research Study in Hygiene Behavior Change (Torres et al., 2001)
- INTEC/Campe web page (<http://www.intec.edu.do/campe>)
- Final Program Evaluation – REIH Project - NRECA
- Seismic study and map for La Zurza, Capotillo and Simon Bolivar (IRG)
- Flood study and map for La Zurza, Capotillo and Simon Bolivar (USACE)
- Vulnerability study for La Zurza, Capotillo and Simon Bolivar (HUD)
- Dam Safety Program Design and Proposal (USACE)
- Guide for Hazard Resistant Housing (NIST)
- Manual for Structural Assessment of Critical Facilities (NIST)
- Reservoir Management Strategies - Tools for Decision Making (NOAA)
- Forestry Technical Reports (Assessment of forest entomology, log preservation and timber harvesting, fire risks, timber salvaging, fire suppression methods, communications, forest land management planning, GIS/GPS needs, Forestry norms and assessment of Sabana Clara

- National forest, hydrology assessment for Sabana Clara, logging systems, forestry roads management systems, urban forestry assessment). USFS
- Metadata Clearinghouse (USGS)
 - Land Use Map of the DR (USGS)
 - Web page for Dominican Specialty Coffee (USGS)
 - Urban Housing Supply and Demand Study for low-income population (Fondovip/RUDO)
 - Videos highlighting results under specific portions of the Reconstruction program (General Recon NGO activities, Bateyes, Housing, Electricity, INAPA/NGO Water/Sanitation Pilot)

11. List of instrument close out reports prepared per ADS 202.3.8 for contracts, grants, and cooperative agreements (see Annex 3 for detail list of instruments)

Close out reports for all USAID-funded partners are pending submission of final reports, evaluations, and audits (due 3/31/02).

12. Name and contact point of individuals who were directly involved in various phases of the SPO (planning, achieving, assessing and learning), and who would be good sources of information.

See annex # 4 for complete list of USAID team members involved in all phases of project design and implementation. This list also includes list of current representatives from the various partners involved in the project.

Annex 1

USAID/Santo Domingo RECON Special Objective Program Portfolio

Annex 2

Hurricane Georges Reconstruction Project Financial Status as of 31, December

Annex 3

Contact list by IR and list of Grantees

Annex 4

Hurricane Georges Reconstruction Team Members

Annex 5

ENTRENA Final Report

Annex 6

Hurricane Georges Recovery and Reconstruction Special Objective Strategy and Original Targets

Annex 7

RECON Quarterly Newsletter to Congress

Annex 8

Rebuilding Lives RECON Pictorial Presentation